

**Remarks:**

1. The abstract has been amended to remove all legal phraseology in accordance with the Examiner's request.
2. Claims 1, 3, 17, and 27 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Nassar et al. (Nassar; US Patent 5,325,083).
  - a. The limitations from Claims 1, 3 and 4 have been combined to create an amended claim 4. The prior art does not teach four detectors with unique codes for every position including the transition positions. Nassar et al does teach four detectors, but uses the same bit pattern between OverDrive and Drive as it does between Drive and Low, which is bit pattern T3. Using the same bit pattern in two transition positions hinders the ability of the system to diagnose detector failures. This patentably distinguishes the instant invention over the prior art.
  - b. Claim 17 has been amended to include the limitations of three detectors and also the limitations of "each of said plurality of signals changes when the transmission is shifted from park to reverse and the plurality of signals are in a mixed state when the vehicle is started in park" (claims 18 and 19). None of the prior art teaches or suggests the importance of having all of the bits change when the transmission is shifted from park to reverse. This feature gives the system an immediate check to see if all of the detectors are working properly while only requiring the minimum three detectors.
  - c. Claim 27 has been canceled.

3. Claims 10, 11, 12, 14, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nassar et al.
  - a. Regarding claim 10, applicants respectfully point out that there are distinct advantages to the novel bit map that is claimed. None of the prior art teaches or discloses having the "Park" state be mixed (some detectors on and some off" along with having all of the bits change as the transmission is shifted from Park to Reverse. This gives the controller the ability to know if the system is powered and then gives it the ability to immediately diagnose if one or more of the detectors is not operating properly. In the prior art, it would take several shift changes to diagnose that one of the detectors was not operating properly. Applicants contend that this is patentably distinguishable over the prior art, being neither disclosed nor suggested in the prior art, and therefore non-obvious.
  - b. Regarding claims 11-16, as these claims depend from claim 10, for at least the reasons cited above, applicants contend that these claims are in condition for allowance.
4. Claims 2, 5, 6, 7, 8, 9, 13, 18, 19, 20, 21, 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nassar in view of Santos et al. (Santos; US Patent 5,307,013).
  - a. Claim 2 has been canceled
  - b. Re claim 5, claim 5 has been amended to include the limitations of canceled claim 1 and canceled claim 2. As the Examiner has stated, Nassar does teach having two or more of the bits change between each operating position of the transmission. However, the instant invention, requiring all of the bits to change when the

transmission is shifted from Park to Reverse is an important improvement on the disclosure of Nassar, allowing the controller to detect immediately if one of the detectors or its associated circuitry is not operating properly.

- c. Re claim 6, claim 6 has been amended to include the limitations of canceled claim 1 and canceled claim 2. The Examiner asserts that Nassar and Santos disclose all of the claimed limitations. However, applicants respectfully point out that the “OD” position of Nassar is analogous to the “D” position of the instant application. Both are the first forward driving position that is encountered when the transmission is moved out of the Neutral position. Also, none of the prior art discloses or suggests purposefully changing all of the bits on this action in order to immediately detect a problem and take corrective action. Applicants contend that the instant invention is patentable distinguished over Nassar and Santos.
- d. Regarding claims 7 and 8, both of these claims depend from claim 5, so applicants contend that for at least the reasons cited above they are in condition for allowance.
- e. Regarding claim 9, claim 9 depends from claim 8, so applicants contend that for at least the reasons cited above, claim 9 is in condition for allowance.
- f. Re claim 13, see point 3(b) above.
- g. Regarding Claim 18, claim 18 is canceled.
- h. Regarding Claim 19, claim 19 is canceled.

- i. Re claim 20, claim 20 has been amended to depend from amended claim 17.  
Therefore, for at least the reasons cited in point 2(b) above, applicants contend that claim 20 is in condition for allowance.
  - j. Re claims 21 and 22, both claims have been amended to depend from amended claim 17. Therefore, for at least the reasons cited in point 2(b) above, applicants contend that claims 21 and 22 is in condition for allowance.
  - k. Claim 23 depends from amended claim 22 and therefore for the reasons cited above, applicants contend it is in condition for allowance.
5. Claims 4, 24, 25, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nassar in view of Dourra et al. (Dourra; US Patent 6,072,390).
- a. Re claim 4, claim 4 has been amended to include the limitations of canceled claims 1 and 3. Applicants point out that Dourra requires five detectors to accomplish the same result (a unique bit pattern for each operating and transition position of the encoder) as the instant invention. Because Dourra teaches five detectors, applicants contend that it would have not been obvious to combine the teaching of Dourra with Nassar. For this reason, applicants contend that amended claim 4 is in condition for allowance.
  - b. Regarding claim 24, the limitations of original claim 17 have been added to claim 24. Applicants point out that Dourra requires five detectors to accomplish the same result (a unique bit pattern for each operating and transition position of the encoder) as the instant invention. Because Dourra teaches five detectors, applicants contend that it would have not been obvious to combine the teaching of

Dourra with Nassar. For this reason, applicants contend that amended claim 24 is in condition for allowance.

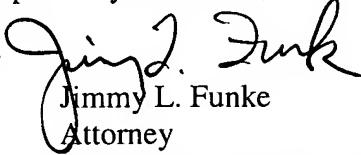
- c. Re claim 25, amended claim 25 depends from amended claim 24. Therefore, for at least the reasons cited in point 5(b), applicants contend that amended claim 25 is in condition for allowance.
- d. Re claim 26, claim 26 depends from amended claim 25. Therefore, for at least the reasons cited in point 5(c), applicants contend that claim 26 is in condition for allowance.

Applicants appreciate the Examiner's thorough examination of the instant application.

Applicants believe that the application is now in condition for allowance and look forward to a timely Notice of Allowance.

The Commissioner is authorized to charge our Deposit Account No. 50-0831 for any fees associated with filing this Amendment.

Respectfully submitted,

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